



CENTER  
for DIGITAL  
**STORY**  
TELLING

# **DIGITAL STORYTELLING** **COOKBOOK**

**February 2007**

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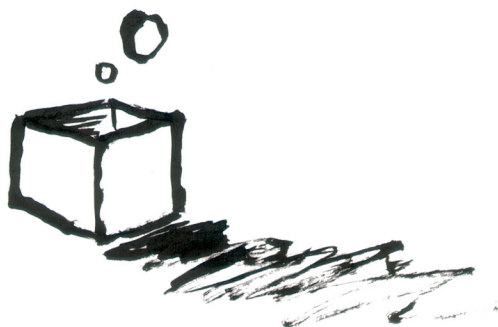
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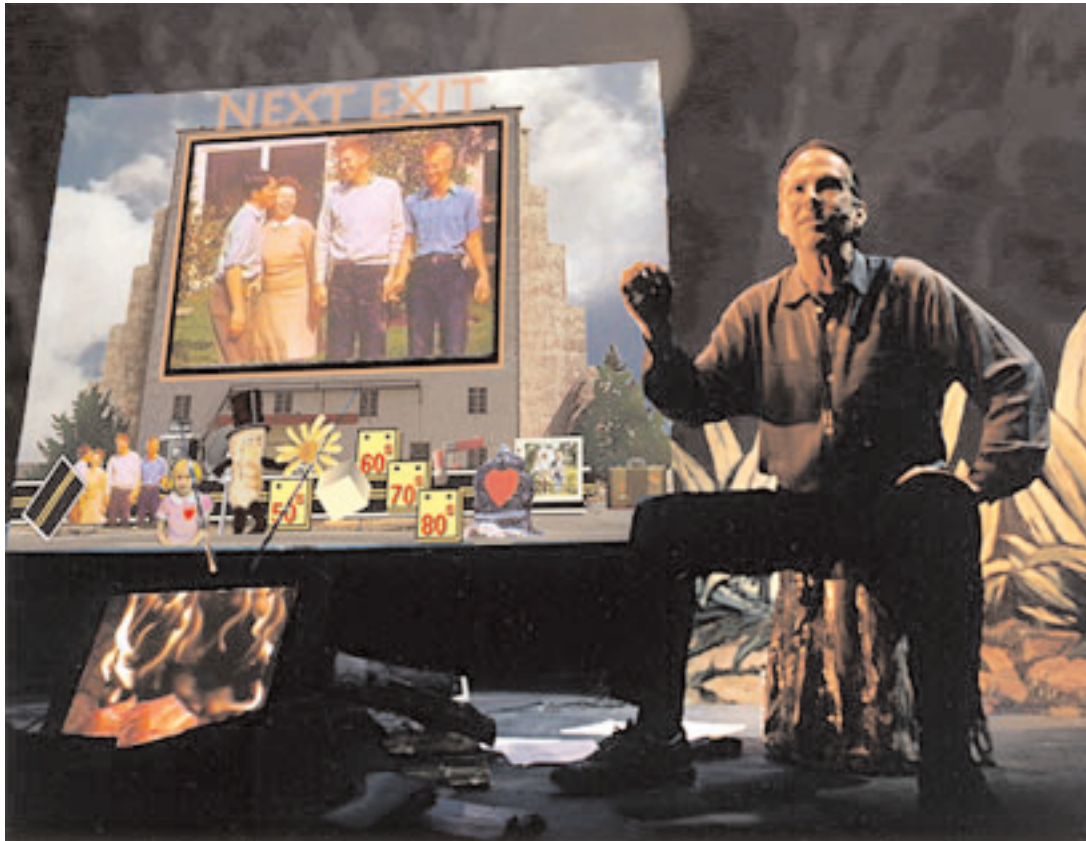
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# Contents

## Preface

1	Stories in Our Lives.....	1
2	Seven Elements.....	9
3	Approaches to Scripting.....	20
4	Storyboarding.....	26
5	Digitizing Story Elements .....	31
6	Introduction to Photoshop Elements .....	39
7	Introduction to Digital Video Editing Software .....	55

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Our work in Digital Storytelling was inspired by the efforts of the late Dana W. Atchley. His performance *Next Exit*, and the stories he shared, continue to inspire others to honor their lives.

Find out more about Dana Atchley's work at [www.nextexit.com](http://www.nextexit.com).

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# Preface

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“Stories move in circles. They don’t move in straight lines. So it helps if you listen in circles. There are stories inside stories and stories between stories, and finding your way through them is as easy and as hard as finding your way home. And part of the finding is getting lost. And when you’re lost, you start to look around and listen.”

- Corey Fischer, Albert Greenberg, and Naomi Newman  
A Travelling Jewish Theatre from *Coming from a Great Distance*  
Excerpted from *Writing for Your Life* by Deena Metzger

When I worked in theater, the first show at my venue was a show by John O’Neal, the legendary founder of the Free Southern Theater.

He was doing one of his Junebug Jabbo Jones stories, recounting the events of the rural south and the civil rights movement. Ten years later to the week, John O’Neal was the last performer before I turned my theater over to new managers, performing with Naomi Newman in *Crossing the Broken Bridge*, a story about African-American and Jewish American relations.

These bookends of my professional theater experience say a great deal about the role story and ancient root cultures played in forming my attitude about the storytelling arts in our civic life. In the tremendous oral traditions of African and Jewish cultures, there is an assessment of storymaking and telling that is synonymous with the value of life itself. Story is learning, celebrating, healing, and remembering. Each part of the life process necessitates it. Failure to make story honor these passages threatens the consciousness of communal identity. Honoring a life event with the sacrament of story is a profound spiritual value for these cultures. It enriches the individual, emotional and cultural development, and perhaps ultimately, the more mysterious development of their soul.

The circles of stories passing through the journey of my life as a digital storytelling facilitator have brought me back to this. As we are made of water, bone, and biochemistry, we are made of stories. The students that share their stories in our circles recognize a metamorphosis of sorts, a changing, that makes them feel different about their lives, their identities.

In this cookbook, we share with you our storytelling approach. We hope you will find it inspiring as well as useful.

Our cookbook has just one recipe, *Momnotmom* by Thenmozhi Soundararajan. To view the completed piece, visit us on-line at [www.storycenter.org](http://www.storycenter.org).

The rest of this cookbook will break this digital story down into a recipe with ingredients, that will help you to prepare it all again. We’ll talk more about stories in general too, so you can take this recipe and adapt it to your own tastes. We encourage you to make the digital story you’re hungry for.

- Joe Lambert, Director  
Center for Digital Storytelling

# 1 Stories in Our Lives

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A story can be as short as explaining why you bought your first car or house or as long as *War and Peace*. Your own desires in life, the kinds and types of struggles you have faced, and, most importantly, the number and depth of realizations you have taken from your experience all shape your natural abilities as an effective storyteller. Translating those realizations into stories in the form of essays, memoirs, autobiographies, short stories, novels, plays, screenplays, or multimedia scripts, is mainly about time. You need time to put the raw material before you, time to learn procedures and approaches for crafting the story, and time to listen to the feedback and improve upon your efforts.

For some, conceiving an idea for a story is an easy process; for others it is the beginning of a crisis. The issue of how we get from our conversational use of story to crafting a work that stands on its own falls more into the category of a general creative process. Why and how do we remember stories? What affects our ability to retain stories? How do we develop our own sense of voice and story? And what kinds of stories from our personal and work lives are likely to work as multimedia stories?

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## *That Reminds Me of a Story*

Cultural anthropologist Gregory Bateson was asked in the 1950s if he believed that computer artificial intelligence was possible. He responded that he did not know, but he believed when you would ask a computer a yes-or-no question and it responded with "that reminds me of a story," you would be close.

Our understanding of how story is at the core of human activity has been a subject of fascination for academics and experts in the computer age. Educational and artificial intelligence theorist Roger Schank has been arguing in the last decade that the road to understanding human intelligence, and therefore to constructing artificial intelligence, is built on story. In Schank's 1992 book, *Tell Me a Story*, he suggests that the cyclical process of developing increasingly complex levels of stories that we apply in increasingly sophisticated ways to specific situations is one way to map the human cognitive development process. Stories are the large and small instruments of meaning, of explanation, that we store in our memories. We cannot live without them.

So why is it that when many of us are asked to construct a story as a formal presentation to illustrate a point, we go blank? We informally tell stories all the time, but the conscious construction of story calls up mental blocks. Here are three possible reasons.

### **Overloaded Memory Bank**

From the standpoint of cognitive theory, the problem is about being overwhelmed by stories that we cannot process. Our minds construct bits of memory immediately after an experience or the hearing of a story, and unless we have a dramatic experience, or have a particular reason to constantly recite the story of the experience, it slowly

diminishes in our memory. Retrieval of a given story for application at the point that we are analyzing something or making a judgment naturally becomes more difficult the farther away we are in time from that originating story.

In oral culture, we humans learned to store the stories as epigrams, little tales that had a meaningful proverb at the end. The constant repetition of epigrammatic tales gave us a stock supply of references to put to appropriate use, like the hundreds of cowboy sayings I grew up with in Texas, to apply to a wide range of situations. In our current culture, many of us have not developed an epigrammatic learning equivalent to these processes.

At the same time, we are bombarded with millions of indigestible, literally unmemorable, story fragments every time we pick up a phone, bump into a friend, watch TV, listen to the radio, read a book or a newspaper, or browse the Web. We cannot process these into epigrams, recite and retain them, and so they become a jumble of fragments that actually inhibit our ability to construct a coherent story.

Only people who develop effective filtering, indexing, and repackaging tools in their minds can manage to successfully and consistently articulate meaning that reconstructs as a coherent story. We think of the skilled professionals in any given field as having developed this process for their specialty. They can tell appropriate stories—the memory of cases for a trial lawyer, for example—based on having systematized a portion of their memories. But most skilled professionals have difficulty crossing over into using examples outside their field, from their personal life or nonprofessional experience. Those who do, we often describe as storytellers.

This is one of the arguments for the lifelong Memory Box as a retrieval/filtering/construction system to assist us in this process. Images, videos, sounds, and other representations of events from our life can help us to reconstruct more complete memories and therefore expand the repertoire of story that we can put to use.

### **The Editor**

Having worked in arts education settings, we are experienced with people telling us that they have no story to tell. Along with language arts educators and psychologists, we are aware that as humans most of us carry around a little voice, the editor, that tells us that what we have to say is not entertaining or substantial enough to be heard. That editor is a composite figure of everyone in our lives who has diminished our sense of creative ability, from family members, to teachers, to employers, to the society as a whole. We live in a culture where expert story making is a highly valued and rewarded craft.

Once we fall behind in developing our natural storytelling abilities to their fullest extent, it takes a much longer commitment and concentration to reclaim those abilities. As adults, time spent in these creative endeavors is generally considered frivolous and marginal by our society, and so few pursue it. Those of us who have assisted people in trying to reclaim their voice know that it requires a tremendous sensitivity to successfully bring people to a point where they trust that the stories they do tell are vital, emotionally powerful, and unique. Were it not that we as human beings have a deep intuitive sense of the power of story, it would be a wonder that we would have a popular storytelling tradition at all.



## The Good Consumer Habit

Our awareness of the residual impact of mass media has grown tremendously over the past 30 years. Media literacy experts have thoroughly documented that prolonged exposure to mass media over time disintegrates our critical intelligence. The process is, in part, the effect of the over-stimulation we already mentioned. Yet, beyond the fact that we are immersed in too much TV and other media, it is the style in which these media, particularly advertising, present themselves that actually affects our sense of ourselves as storytellers. If I can get more attention for the kind of shoes I wear or the style of my hair at one-tenth the conscious effort of explaining what the heck is wrong or right about my life in a way that moves you, why bother being a storyteller? Status and recognition, in our consumer culture, is an off-the-rack item.

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## *Finding Your Story*

For all these reasons and quite a few others, a person's initial efforts at story making can be frustrating. We have worked with several high-powered communicators who froze up like a deer in the headlights when it came time for them to construct an emotionally compelling personal tale.

The starting point for overcoming a creative block is to begin with a small idea. It is a natural tendency to want to make a novel or screenplay out of a portion of our life experiences, to think in terms of getting all the details. But it is exactly that kind of scale that disables our memory. Our emphasis on using photographic imagery in our digital storytelling workshops facilitates the process of taking a potential story, picture by picture. Pedro Meyer, in creating his breathtakingly compelling *I Photograph to Remember* CD-ROM, recorded the narrative by simply setting up a tape recorder in his living room. He asked his publisher Bob Stein to sit beside him as he recorded his voice as he described each photograph to Bob. That was it. One take and it became the voiceover that was used for the CD-ROM. This process may work for your project.

Perhaps your project does not originate with visual material on hand. Take a look at our example interview questions in the next section for various kinds of short personal stories. Have someone interview you, then transcribe the words and see what they tell you about the story you are trying to conceive.

As you are working up your raw material for a story, you are also working up your storytelling, or narrative voice. Everyone has a unique style of expressing himself or herself that can jump off the page or resonate in a storytelling presentation. Realizing that voice - making it as rich and textured as you are as a person - takes time and practice.

For many professional communicators, the process of moving from a journalistic or technical, official voice to an organic, natural voice is often difficult. It is as if we are trying to merge the two different parts of our brains, the analytical and the emotive, and most of us cannot switch back and forth without getting dizzy. The official voice is the voice of our expository writing class, our essays and term papers, or our formal memos and letters to our professional colleagues. We have been taught that this voice carries dispassionate authority, useful perhaps in avoiding misunderstandings, but absolutely deadly as a story.



Getting feedback also helps us identify our narrative voice. Reading material to someone who knows us well and asking him or her to identify which part is true to your voice are useful practices. Of course, the crafting of the language, moving away from cliché, eliminating redundancy, and getting out the thesaurus to substitute your overused verbs and adjectives, is also imperative.

Take your time, though, and let the ideas and meanings sink in before you edit. If something feels overwhelmingly right, do not polish it too much. We have had lots of scripts that started out fresh and authentic, but by the time the authors and collaborators got through with it, it was filled with succinct, gorgeous, yet characterless, prose. The narrative voice had been polished away.

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## ***Interviewing***

This series of question sets for the "Interview" or "Self-Interview" process can assist in the development of different kinds of stories, but it is not meant to supplant a more direct scripting process if that is how you are accustomed to working. However, almost all of us can gain from having source material that appears from an un-self-conscious response to a set of directed questions.

By recording your responses, you may find that you have sufficient material to make your voiceover. Cutting and rearranging your responses using digital audio editing may be all that is required. If you take this route, keep in mind that you must take steps to have a good-quality recording.

## **Interviewing Techniques**

You may find it easier to respond to these questions directly into a microphone in the privacy of your own home or office. If the prospect of talking to a recording device is off-putting (and it may be more likely to increase your self-consciousness than relax you), have someone interview you. This could be a friend, a spouse, relative, or co-worker. This process can be both fun and revealing but requires that the interviewer commit to a few common-sense ideas.

## **Guidelines for the Interviewer**

First, study the questions so that you are not reading from the page, and feel free to ad lib. Being able to sustain eye contact assists the interviewee in relaxing and responding in a natural way.

Second, allow the interviewee to complete thoughts. Unlike a radio or TV interviewer that is concerned with "dead air" in the conversation, give the respondent all the time desired to think through and restate something that is a bit difficult to articulate. Interruptions can cause people to lose their train of thought or become self-aware and steer away from important, but perhaps emotionally difficult, information. Let the respondent tell you when he or she is finished with a question before moving on to the next.

Third, when appropriate, use your own intuition to probe further to get a more specific response. Often, a person's initial thought about the question only retrieves the

broadest outline of memory. Feel free to request specifics or details that would clarify or expand upon a general response.

Fourth, if the story is specifically painful or traumatic in the person's life, assess carefully how far you allow the respondent to delve into these memories. In many situations where the interviewer is not a spouse or close loved one, you may cross into territory that is much better approached in the context of a purposely therapeutic environment with experienced guides or professionally trained advisors. We have come perilously close in interviews to taking people into an emotional state from which they cannot return at the session. This is embarrassing for the respondent and emotionally inconsiderate, as they may not have the therapeutic support to cope with these issues in the hours and days after the interview. Don't feel you need to hunt for emotionally charged material to make the interview effective. If it comes naturally and comfortably, so be it.

Finally, along with ensuring privacy in the interview, make sure both interviewer and interviewee are comfortable: comfortable chairs, water at hand, and the microphone positioned so not to disrupt ease of movement. (A lavalier, or pin-on microphone, is the best.)

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### ***Kinds of Personal Stories***

There are all kinds of stories in our lives that we can develop into multimedia pieces. Here are a few example question sets for some of these stories. Adapting any one of the question sets by integrating sets, or developing a separate set, is encouraged.

#### **The Story About Someone Important**

##### ***Character Stories***

How we love, are inspired by, want to recognize, or find meaning in our relationship to another person or even pet, is deeply important to us. Perhaps the majority of the stories created in our workshops are about a relationship with a singular other. And the best of these stories tell us more about ourselves than the details of our own lives.

##### ***Memorial Stories***

Honoring and remembering people who have passed is an essential part of the process of grieving. While these stories are often the most difficult and painful to produce, the results are the most powerful.

- What is or had been your relationship to this person?
- How would you describe this person (physical appearance, character, etc.)?
- Is there an event/incident that best captures their character?
- What about them do/did you most enjoy?
- What about them drives you crazy?
- What lesson did they give you that you feel is important?
- If you had something to say to them, that they may have never heard you

say, what would it be?

## **The Story About an Event in My Life**

### ***Adventure Stories***

One of the reasons we travel is that the break from the norm of our lives helps to create vivid memories. All of us who travel, or go on serious adventures, know that the experience is usually an invitation to challenge ourselves, to change our perspective about our lives, to reassess. We often return from these experiences with personal realizations, and the process of recounting our travel stories is as much about sharing those realizations as sharing the sense of beauty or interest in the place visited.

But strangely enough, while almost every one tells good travel stories, it is often difficult to make an effective multimedia piece out of such material. We rarely think about constructing a story with our photographs or videos in advance of a trip. And we do not want to take ourselves out of the most exhilarating moments by taking out a camera and recording. Before your next trip, think about creating a story outline based on an archetype prior to your visit, and what sorts of images, video, or sounds would be useful to establish the story. That way you can gather some story-related shots at your leisure.

### ***Accomplishment Stories***

There are accomplishment stories about achieving a goal, like graduating from school, landing a major contract, or being on the winning team in a sporting event. These stories easily fit into the desire-struggle-realization structure of a classic story. They also tend to be documented, so you might find it easy to construct a multimedia story. Television sports have taken up the accomplishment story as a staple, and it might be helpful for you to look at and deconstruct an "Olympic moment" to see how they balance establishing information, interviews, and voiceover.

- What was the event (time, place, incident, or series of incidents)?
- What was your relationship to the event?
- With what other people did you experience this event?
- Was there a defining moment in the event?
- How did you feel during this event (fear, exhilaration, sharpened awareness, or joy)?
- Why did you learn from this event?
- How did this event change your life?

## **The Story About a Place in My Life**

Up until this century, 90% of the world's population was born, lived, and died without ever leaving a ten-mile radius of their homes. While this is difficult for us to imagine, our sense of place is the basis of many profound stories. One of the earliest interactive storytelling Web sites was a German project, 1,000 Rooms, that invited people to send a single image of their room at home, and to tell a story about their relationship to their room. Hundreds of people responded with their own intimate stories. You may have a story about your home, an ancestral home, a town, a park, mountain, or forest you love, a restaurant, store, or gathering place. Your insights into place give

us insight into your sense of values and connection to community.

- How would you describe the place?
- With whom did you share this place?
- What general experiences do you relate to this place?
- Was there a defining experience at the place?
- What lessons about yourself do you draw from your relationship to this place?
- If you have returned to this place, how has it changed?

### **The Story About What I Do**

Life story for many people in professional careers is shaped by their jobs. Author Studs Terkel collected a series of interviews in his book, "Working," that demonstrated that we all have unique ways of perceiving and valuing our jobs. For other people, the thing that they do that has most value to them is their hobby or ongoing social commitments. Poignancy often comes from looking at the familiar in a new way, with a new meaning. The details of the tasks, the culture of the characters that inhabit our workplace, our spiritual or philosophical relationship to work, avocational or vocational, lead us into many stories.

- What is your profession or ongoing interest?
- What experiences, interests, knowledge in your previous life prepared you for this activity?
- Was there an event that most affected your decision to pursue the interest?
- Who influenced or assisted you in shaping your career, interest, or skill in this area?
- How has your profession or interest affected your life as a whole (family, friends, where you live)?
- What has been the highlight of your vocational/avocational life?

### **Other Personal Stories**

#### ***Recovery Stories***

Sharing the experience of overcoming a great challenge in life, like a health crisis or a great personal obstacle, is the fundamental archetype in human story making. If you can transmit the range of experience from descent, to crisis, to realization, you can always move an audience.

#### ***Love Stories***

Romance and partnership, familial or fraternal love, also naturally lend themselves to the desire-struggle-realization formula. We all want to know how someone met their partner, what it was like when the baby was born, or what our relationship is with our siblings and parents. We constantly test everyone's experience in these fundamental relationships to affirm our own. These are also stories that tend to have plenty of existing documentation.

#### ***Discovery Stories***

The process of learning is a rich field to mine for stories. The detective in us gets great pleasure in illustrating how we uncovered the facts to get at the truth, whether it is in fixing a broken bicycle or developing a new product.

### ***Don't Just Sit There***

As you decide what story would best serve your personal needs, or the needs of your performing or presentation context, keep in mind that these categories are in no way sacrosanct. They cross over in a number of ways. It is also probable that you will come up with your own additional categories or other ways of dissecting the stories in your mind.

One of the hardest but most important things to do is get started. Because many of these stories ask us to reveal things about ourselves that make us feel vulnerable, it is a procrastinator's paradise. Just get up and start answering questions on a tape recorder, writing things down, gathering up photos, looking at old videos, and bouncing your ideas around your friends and family.

Life is full of stories, but you may not have a lifetime to capture them as movies. So go for it!

## 2 Seven Elements

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There are many kinds of stories and many ways to find your creative voice as a storyteller, but it is almost impossible to imagine the number of ways a single story can be structured. And, when you factor in the choices of the filmmaker (in choosing and designing visual elements and audio, thinking about how the story is performed and paced, and considering what is possible in the world of computer-generated effects), we are talking about an infinite variety of expression.

Fortunately, the participants in our classes arrive with an enormous range of skills and life experiences that suggest a particular path of individual style and structure to their stories. Our role as digital storytelling facilitators is to coach storytellers past the particular roadblocks they face. This kind of story coaching is a dynamic process, not a prescribed one. An entire range of issues, both technical and emotional, must be considered when offering suggestions. There are as many ways to do this as there are people in the world.

When we succeed in providing the right sort of feedback to a workshop participant, we often witness an extraordinary transformation in the quality of a story. It is gratifying for us as teachers to bring a new story to life in this way. To see the eyes of the creator well up with tears of surprise and joy at what he or she has accomplished, and to see others moved and inspired by the power of the piece, is what keeps us going, class after class.

The seven elements presented here evolved after we had been teaching our workshops for a couple of years. We decided at that point to introduce each class to some very basic elements of constructing a multimedia story. The elements are distilled from collective wisdom and teaching about narrative structure and the development of a visual treatment for a story.

Considering the emotional fragility of exploring a personal issue and the feelings of inadequacy that can arise when working with computers or multimedia, we understood that the last thing our students needed was someone dictating a specific formula to them. So we kept it simple. Our principle consideration was to be brief and inspirational as we illustrated our few points with examples of student work from previous classes.

The seven elements we describe in the pages that follow will give you a great deal to consider in constructing your own story. We carry out our storytelling process in group settings, because we believe that most people do not simply read a book and do the work. Storytelling is meant to be a collaborative art. It is much more realistic that way, and much more fun. We hope you, too, will view the process of digital storytelling as an opportunity to open up, connect, learn, and grow as part of a collective.

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### **1. Point (of View)**

What makes a story a story? Dictionary definitions may call it a narrative, a tale, a report, an account, and that would seem to cover it.

But hold on. When we think of a story, true or imagined, we do not consider someone sitting in front of us reciting a series of events like a robot: "This happened, then this happened, and then this happened." Hardly anyone narrates events in their lives without some good reason for it.

We believe all stories are told to make a point. Most stories follow the pattern of describing a desire, a need, or a problem that must be addressed by a central character. When we are the central character, the story follows the action this desire leads us to take and then reveals realizations or insights that occurred as we experienced the events of our actions and their relationship to our original desire. By point of view, we are primarily addressing the issue of defining the specific realization you, as an author, are trying to communicate within your story. Because every part of the story can service this point, it becomes imperative to define this goal in order to direct the editing process.

We need look no further than proverbs to illustrate what we mean by a point of view. "A stitch in time saves nine." "A penny wise and a pound foolish." These are the points of stories: what somebody realized is the actual result, versus the desired effect, of a planned action. We may have forgotten the story, but we remember the point. In novels or theater, another way of expressing the point of the story is the central premise. For example, in *King Lear*, the point or central premise is "blind trust leads to destruction." In *Macbeth*, it is "unbridled greed leads to destruction." Every part of the dramatic action can be boiled down to serving these points of view, and our connection with the story often succeeds or fails in how we understand the central premise as the operating context for the story's action. In well-crafted stories, the point may be a little less apparent than the moral of a fairy tale, and it might require some thought, but if the story touched you, chances are you can define some central points or the transformative realizations the author intended.

### Example

In 1994, we assisted on a project called *The Answer*, created by the husband-and-wife team of Rob Decker and Suzanne Serpas. They were both psychologists with an interest in the potential of autobiography as a therapeutic tool. They came to us with a large box of stock commercial images and an ambitious concept to provide a metaphoric look at the importance of a humanist perspective on the world, a kind of commercial for their brand of psychotherapy. We felt that they had defined their subject so broadly that they would not be able to complete the project over the weekend. We also felt that their personal connection to the point of the story was lost. We suggested they narrow the subject and asked if they had an example of the kind of realization they wanted their audience to experience. Rob subsequently offered the story that became the script of the final piece:

*The other day I asked my 7-year-old daughter about the meaning of life. "Well," she answered without hesitation, "there's having fun, having love in your family, and learning things, you know, knowledge." I spent 49 years searching for the meaning of life. I guess I should have had the good sense to ask a kid in the first place.*

They simply juxtaposed Rob reciting the story with the standard family images and home video, and voila: a powerful little tale about their realization about how we define our essential human values from an early age.



In thinking about the point of a story, we may also want to consider the reason for telling this particular story. Why this story, now, for this group of people? Defining these issues inevitably helps to define which of the many proverbial summations we might take from a given story.

Let's imagine a fairly typical process of developing a story and the struggle to define point of view.

*Esperanza has decided to make a story about her non-profit organization, Familias Unidas, a community organization assisting low income Latino families with negotiating the social service system. From the organizational brochure, and from all the grant proposals she has written, she has a great deal of argumentation about why her organization exists and why it deserves continued community support. She also has 10 years of images of work with community members, special events, staff members, and the several times the organization has been recognized with awards.*

*But as she thinks about the purpose of her story, she realizes the mission statement and lists of achievements do not really capture the emotional essence of what they do. If the digital story is going to be presented to their supporters at the Christmas fundraiser and then put on the website, it needs to move people, not just present a list of activities, goals, and objectives.*

*What she decides is to create a portrait of one of the families they have helped. Esperanza has always liked the profiles of community service she has seen on television. She knows just the family, the Sanchez family. She goes to meet with them, and they are interested. But as they talk about the role of Familias Unidas in their lives, Esperanza realizes their story only touches on one or two of the half dozen programs the organization offers. She needs several families to capture a broad enough point of view about the organization to connect with the different stakeholders in her communities of support. This is so much work. "This will never get done," Esperanza thinks. She is the director of the program, and as it is, she barely has time to work on the project.*

*That night, she speaks with her partner, Carolina, who laughs about how Esperanza is always getting overwhelmed. "Just like how you started the whole thing, fresh out of college, full of ideals, you start helping a few friends of your cousin get some paperwork turned in for the local clinic, and the next thing you were helping everyone in the vecino. You hardly slept then." Esperanza remembered these times, and how passionate she felt, and how her passion inspired others to take up this work, and to give donations to support it. Maybe that's the story, not just what we do, but why we do it, how caring starts with just one person. She calls her cousin and asks if he would be willing to tell the story of those first projects. He says he would be honored. She starts writing, and the words flow. From this beginning story she connects the Sanchez family's experience to show how the program became professionalized, and she finishes with a reflection on her own growth and the gifts that this work has given her.*

*At midnight, she closes her laptop. Esperanza sees the movie playing in her head. "I know just the images to use," she says to herself. On the desk next to her computer, she has an ofrenda, an altar, to her grandmother. Just as she lights the candle, as she does each night before bed, she feels a light puff of air blow from over her shoulder. She looks back. Nothing.*

A breath? An affirmation.

Maybe Esperanza got more than her name from her abuelita.

From this story, you can see how the process of defining premise is both demanding and enlightening. We have seen in project after project, workshop participants struggling for that particular clarity of purpose, having the insight come to them at the last moment, and the piece practically editing itself once they find the ideal point of view.

The story of Esperanza also illustrates another perspective we have on Point of View. We believe all stories are personal. For most storytellers, couching the story in the first-person point of view, either throughout the story or as a frame around the story, is an invitation to hearing the story in a more personal context. This tends to increase our attention as we look for insights about you as a storyteller. That is, "This is my version of events and my realizations, and I am self-aware about how my own prejudices, expertise, and frames of reference affect the 'truth' about the story."

We, as information consumers, are becoming increasingly sophisticated at discerning the authenticity of information. In general, we prefer the frank admission of responsibility that the first-person voice provides to the authoritative, seemingly neutral, but nevertheless obscure stance of the third-person voice.

In our workshops, we have advised against the brochure-ware approach to narrative associated with the business language, bureaucratese or "grant-speak" that is endemic in our culture. When possible, the person making the story should find their own connection to the material. If an organization wants to capture the stories of their clients, consumers, or staff members, then they should invite those stakeholders to write and create their own digital stories.

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## 2. Dramatic Question

Simply making a point doesn't necessarily keep people's attention throughout a story. Well-crafted stories, from Shakespeare to Seinfeld, set up a tension from the beginning that holds you until the end.

In Tristane Rainer's *Your Life As Story*, she reduces all stories to a desire-action-realization model. For her, a story establishes a central desire in the beginning in such a way that the satisfaction or denial of that desire must be resolved in order for the story to end. The conflicts that arise between our desires being met and the desire of other characters or larger forces to stop us creates the dramatic tension.

Dramatic and storytelling theorists, anthropologists, philosophers, and psychologists since the time of Aristotle have attempted to analyze how the action of a story is established and sustained. We have found that delineating structural story components for students who are essentially working in a short narrative form are much too complicated. Writing a script that slavishly follows a formal structure tends to create wooden, melodramatic writing that we can smell a mile off as not reflecting the author's true voice. So we have reduced these several concepts to one.

We refer to a term coined from dramatic theory, "the dramatic question," to summarize an approach. In a romance, will the girl get the guy? In an adventure, will the hero

reach the goal? In a crime or murder mystery, who did it? When any of these questions are answered, the story is over.

Again, sophisticated story making distinguishes itself by burying the presentation of the dramatic question, like the realization, in ways that do not call attention to the underlying structure.

Monte Hallis' piece, *Tanya*, was created in the very first digital storytelling class we taught at the American Film Institute in 1993. It remains one of the most poignant and efficient expressions of digital storytelling we have experienced and also has served as an ideal example of a number of the elements we are currently describing, particularly the dramatic question.

*When I was young, I never really understood what friendship was. I was shy, and confused friendship with popularity. Last year I met Tanya, and we became the kind of friends that most people are, acquaintances. Tanya had started an organization for women like herself. Tanya had AIDS and knew she would die soon, and she wanted to find someone to love and care for her children. The minute Tanya opened her mouth it was like the whole world had been waiting to hear her story. But despite all her work, she really felt she had accomplished one thing, and it was [her friendship with] me, and I couldn't let her dreams die with her. The other night Tanya told me to lay my head down next to hers. She whispered, "Monte Fae, all we got is where we are going." I couldn't believe she knew my middle name.*

—Monte Hallis (1993, all rights reserved)

The statement of the dramatic question is elegantly posed and resolved in the first and closing lines. Monte states at the beginning that she didn't understand friendship. At the end she leaves us with a rather open-ended statement, "I couldn't believe she knew my middle name." It does not take much sophistication to interpret the dramatic question, "What is the meaning of friendship?" The answer suggests that it is the ways in which we unconsciously exchange intimate information with each other.

In this case, the particular meaning of the resolution of the dramatic question is in fact the central point of the story. But here is an important distinction. What we are really talking about with the dramatic question is a structural "setup," corresponding to a logical "payoff." The meaning of the story, as we have suggested, doesn't have to have anything to do with the structure, just as there are hundreds of ways to draw different meanings out of any given sequence of events.

We are trained from early on to recognize that different dramatic questions often lead to predictable answers. If the question is about how the girl gets the guy, our immediate assumption is that either the guy, or someone the guy knows, doesn't want the guy to be gotten. As a result, manipulating expectations is precisely what entertains us. What if the girl thinks she wants one guy, but she really wants the guy who is trying to stop her from getting the original guy? What if she decides to chuck the whole thing and become a nun? Are we unhappy? Only if there was nothing to suggest that these events were consistent with her behavior will we be confused or dismayed. A good author will make you think the central dramatic question was "Will the girl get the guy?" when it really was "Will the girl find happiness?" and we have learned early on that she doesn't define herself completely by her role as spousal partner. If you watch movies, you know the possibilities for manipulating the dramatic question are endless.

When we have the expectation pulled out from under us in a story, when the realization is dramatically different than the setup, it tickles us. The classic short story does the same, leading us quickly into a direction that establishes our expectations, only to twist the expectation at the end.

The more you learn about dramatic structure, the more you dissect familiar stories into their structural components. The more you experiment with rewarding or surprising your audience's expectations sparked by a dramatic question, the more rich and complex your stories will become.

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### **3. Emotional Content**

All of us have been in the middle of a story, a novel, a film, a theatrical or storytelling performance and found ourselves emotionally engaged. It is as if the story had reached inside our consciousness and taken hold of us, and we know in that moment that we are in for a tearful or joyous ride.

This effect is principally a result of a truthful approach to emotional material. A story that deals directly with the fundamental emotional paradigms—of death and our sense of loss, of love and loneliness, of confidence and vulnerability, of acceptance and rejection—will stake a claim on our hearts. Beginning with content that addresses or couches itself in one or another of those contexts will improve the likelihood that you are going to hold an audience's attention.

One of the fundamental ways to understand story's role in our lives is to think of most stories as resurrection tales. A character must know a negation of their desire in order to finally achieve their desire. In the tragic form, the protagonist is usually destroyed in order that other characters, and we the audience, can understand the consequence of the fatal flaw of the character and/or the poignant power of circumstance/fate. In the comic form, love must certainly be lost at some point for us to feel great satisfaction of the final hope for embrace. The hero must be on the very edge of extinction before victory or the goal of the quest is achieved.

Why is this so powerful? On one level, we all have to wake up in the morning and choose to go on -- to resurrect ourselves in the face of fate and circumstance, the memory of loss and almost unbearable struggle, and our own sense of weakness and vulnerability. The stories we are drawn to, that resonate in our direct emotional need, in general, are those that give us a reason to make that decision to go forward. They inspire us. The very word inspire, in its archaic sense, means to breathe again. Stories encourage us to take one more breath, to swim up to the surface, above our despair, and live.

We believe all stories can have an element of these emotional paradigms. Even in our story about Esperanza trying to get her own story together for her organization, we had the potential for negation. She almost gives up, having become overwhelmed with the problem of how to achieve her goal. When you look at the story you want to tell, think about where in the story was the possibility that what was desired—a happy vacation, success in the project, understanding in a relationship—can be contrasted with its opposite— a rainy, nasty day on the beach, a disastrous change in plans, a painful argument. How we get past the hard part and still get what we desire? That is what we want to know.

These are areas that for many of us are a challenge to express in a piece of personal writing or media. We may lack the experience of trying, as most if not all of our formal training processes in narrative—from scholarly essays to journalistic reports—stress distance and de-emotionalized perspectives. Or we may be unresolved about the emotional material, keeping us from gaining perspective or meaning from these experiences. The result of our failure to express our most honest understandings about these kinds of subject matter can lead us to trivialize or overdramatize the material. It can also lead us to being simply overwhelmed by feelings that are brought to the surface.

Is it worth the effort to expose oneself emotionally? In most cases, it is. In our experience with the group production process, people value the courage to explore the intimate space of emotional vulnerability so highly that they will go out of their way to support those willing to attempt emotionally sensitive stories. But sometimes we are forced to steer students away from overpowering material to select a different approach, or abandon the subject of the story entirely. This part of digital storytelling requires plain old-fashioned common sense and maturity.

Along these lines, many people that read this may want to experiment with teaching or leading workshops as a way to mine powerful stories from a group of associates for the purposes of linking those emotions to a product, cause, or service. This may be quite effective, if done with great care and thoughtfulness. It could also be exploitative.

We want to emphasize that exploring emotional material is a personal decision. Our workshops are predicated on the idea of creating a safe place for people to share stories. Protecting and honoring the trust of the workshop is a central tenet of the work. That safety can not be extended to broadcast or publication, or to all potential audiences. Unexpected reactions, innocent or malevolent interpretations that disrespect the author's intent, are possible once the work is released to a broad audience. Thinking through the degree of your emotional vulnerability in shaping the point of view of the story, in regards to audience, is always important.

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#### ***4. The Gift of Your Voice***

In our classes we encourage the storyteller to record a voiceover. Students may want to make a piece with only images and music, and some may work on stories that they feel are best suited to a particular voiceover or character. What we have learned in this process is in itself revealing.

I grew up with a lisp. When I was seven or eight, I had to go to speech therapy classes tho I wouldn't thspeak tho lishpisthly. Like most kids, it made me hate the way my voice sounded. That didn't stop me from being the class clown and being the ham in school productions, or perhaps it emboldened me. But when I first ran into a tape recorder, I couldn't stand the way I sounded. And frankly, it still bothers me.

Having worked with a lot of people who are creating a piece of video that includes their voice for the first time, I realize I am not alone. Either we feel we don't have the clearest diction, or our voices waver, or we are too soft, or too gravelly, or just not like those caramel-textured assertive voices that come across our television sets and radios.

Truly, our voice is a great gift. Those of us fortunate enough to be able to talk out loud should love our voices, because they tell everyone so much about who we are, both how strong we can be and how fragile.

We listen to words spoken in various inflections and go into different modes of listening, which are also different modes of conscious interaction. When we hear conversational tones, we are listening for the moment that suggests response or affirmation, the "Oh I agree, but..." or the "hm-hmm." In a speech, we are listening for an applause line. In a lecture, we are listening for the major points, the outline. In a story, we are listening for an organic rhythmic pattern that allows us to float into reverie. In the place of reverie we have a complex interaction between following the story and allowing the associative memories the story conjures up to wash over us. Consistency in presentation is what allows the audience to participate, and breaking consistency, such as a person who is reciting a monologue suddenly asking someone in the front row a question, is jarring.

We have one specific concern to address about recording our voices: reading versus reciting the script. We all know what it feels like to be at a public event when someone reads a speech from beginning to end. It is downright uncomfortable. We do not know how to interact. We are caught someplace between waiting for the speaker to give pause for us to respond and wanting to drift into reverie, but the cadence and style of presentation does not allow it. We also know why people end up reading texts. They are petrified to speak and/or they simply do not have the time to practice the speech enough so that they can recite from memory. Similarly, in recording a voiceover from a script in our workshops, there usually is a combination of fear and lack of time for practice that means a reading seems like the only option.

The easiest way to improve upon a recording of your voice is to keep the writing terse. Record several takes of the text. The nice thing about a digital sound file is that you can mix and match each of the recording takes to create the best-sounding version. We suggest you work at speaking slowly in a conversational style. Finally, digitally constructing the story from a recorded interview is always a good fallback.

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## ***5. The Power of the Soundtrack***

In our experience, working with beginning students shows that their intuitive sense of what music is appropriate for a media piece is by far their most developed skill in the storytelling arts. In an era where we describe an entire generation as "the children of MTV," as people defined by their absorption of visual media in the context of music, is it any real surprise?

We have come to believe that people now walk around with soundtracks running in their heads. Those soundtracks set the mood of our day, change the way we perceive the visual information streaming into our eyes, and establish a rhythm for our step. It is as if by listening to or imagining a specific slice of music, we are putting ourselves into our own movie, a movie that puts our life into a clearer perspective, or at least entertains us.

From earlier and earlier ages, we are aware of the trick that music can play on our perception of visual information. We are all familiar with how music in a film can stir up an emotional response very different from what the visual information suggests. The

sudden opening of the door becomes the prelude to disaster, when the swelling treble of orchestrated strings calls out suspense to our ears. A sweetly flowing melody over two people looking at each other for the first time signals that these are the romantic characters we will be following in the plot. We know that upbeat music means happy endings, slow and tremulous music means sadness is forecast, fast music means action, heroic music means battles and victorious heroes. We know the stereotypes, and they are repeated enough from one show to the next that we often laugh when we catch ourselves succumbing to the manipulation. As such, even the beginning student generally makes appropriate decisions about music, which either play into or against the stereotypes.

The majority of our students use popular lyrical music. While the songs usually work, mistakes are sometimes made in mixing the lyrical story of the song and the voiceover narrative in a way that results in an unintended conflict of meaning. I remember a young student who liked a particular song that had an appropriate tempo and timbre for his story about his family, but in listening a bit more to the lyrics, we realized the song was a fairly steamy account of passion. We asked if that was intended, and the student admitted that he had not really thought about what was being said in the song.

Instrumental music, be it classical, folk, jazz, or ambient, is often better suited to the style and meaning of the story's text and visual narratives. The digital context makes testing a particular music in the video much easier than in film and analog media, and so experimentation is encouraged. You may find that, by going against the expected, you create another layer of meaning that adds depth and complexity to your story.

Are music videos, or the juxtaposition of music and visual information in a media piece without text and voiceover, storytelling? The answer is yes. However, the specificity of language and the complexity of information that the human voice provides adds enormous emotional substance and authenticity to a media story. So far, we have not experienced a single music video that created as powerful an emotional impact as the same story would have with the addition of the author's voice.

The other area of sound use popular in the film and video tradition is sound effects and other elements of sound design beyond the mix of music and text. There is no question that ambient sound or appropriate noises can add complexity to the narrative. They also can be juxtaposed to add surprise and humor. The development of these skills should be considered if the storytelling projects call for an increased sense of realism or, for that matter, surrealism. Otherwise, it is perhaps best not to experiment with sound effects, as their incidental use can be a distraction.

Using one's own voice and existing personal and moving image archival material have the advantage of being copyrighted by you as the author. By using other's music, you are crossing into the territory of deciding on the appropriate fair use of copyrighted material. Put simply, if you are going to make money directly or indirectly by the presentation or distribution of the piece you have created, or if you hope to broadcast it on television or show it at film festivals, then you should have the composer's permission to use the music. Fortunately, numerous companies have developed copyright-free music collections and software to assist you in designing a soundtrack that is wholly yours. Finding a friend to play a piano or strum a guitar can also solve this problem. Be creative.



## 6. Economy

Despite our emphasis on story, text, and sound, digital media for many storytellers is principally a visual medium that integrates these other elements. As a visual beings, we are concerned with composition and juxtaposition of visual elements in a single screen and over time. Since our emphasis is in repurposing existing images and video, your initial compositional considerations were already decided by how pictures and videos were framed and shot. Our concern here is with sequential composition.

In any story, we use a process called closure. Closure means recognizing the pattern of information being shown or described to us in bits and pieces, and completing the pattern in our minds. In spoken word or written narrative, we are operating at a high level of closure, as we are filling in all the pictures suggested by a text or words from images and memories in our brains. If I start a story, "Once upon a midnight dreary..." you are likely to immediately fill in a mental image of a foreboding castle, rainstorms, ravens, the works. We need specific sensual details, shapes, smells, textures to be stated for us to fill in the picture in our mind.

Storytelling with images means consciously economizing language in relationship to the additional narrative that is provided by the juxtaposition of images. There are two tracks of meaning, the visual and the auditory, and we need to think about the degree of closure each provides in relation to the other. In a normal screenwriting process, the writer is conscious of the visual information that will offer context for the spoken dialogue or narration, and he or she writes into the visual backdrop of the scenes. If the writer and director do a good job, they will shoot just what is necessary to keep the story visually rich while moving forward, with only the minimum of dialogue and number of scenes necessary to allow us to envision the larger story.

However, we are generally working with projects where the images and scenes exist prior to the script, as in a family album. The natural approach is to make a visual narrative by lining up the photos on a table and then figuring out what to say about them. The advantage to starting with images is that you can be very specific about what information you must fill in to make sense of the narrative. The disadvantage is that if there is too big a gap for the audience to close between images, you are left with holes in your story that you have to invent pictures to fill. We have decided that there is no right or wrong way to compose in this situation—script first or image sequence first. Different people have intuitive skills in the visual or text modes and need to decide for themselves which approach to take.

Economy is generally the biggest problem with telling a story. Most people do not realize that the story they have to tell can be effectively illustrated with a small number of images and video and a relatively short text. We purposely put limitations on the number of images and video clips our students use. We also suggest that, if they are starting with a script, they create a storyboard with their material and look at every possible way to edit their words prior to beginning the production process.

In this context, it is also worth discussing the concept of explicit versus implicit illustration and the territory of metaphor and symbolism. Invariably some part of your story calls out for the use of an image that is not literally related to the subject being described. In talking about the end of a romance, you may not have an image that can literally represent loss, but you could show a photograph tearing apart or a heart splitting in two pieces. The implicit meaning, the metaphor, is clear to almost anyone.

Similarly, we can "read" the juxtaposition of visual images as having implicit meaning that is beyond what one or the other image explicitly means by itself. If we have an image of a couple sitting together, followed by the image of one of the couple sitting alone next to an empty chair, we will read the juxtaposition as loss.

By considering illustrations with meaning that implicitly relates to our narration, we can also solve a number of problems we have in filling in the "gaps" in our storyboard.

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## ***7. Pacing***

Often the most transparent feature of a story is how it is paced. Pacing is considered by many to be the true secret of successful storytelling. The rhythm of a story determines much of what sustains an audience's interest. A fast-paced movie with many quick edits and upbeat music can suggest urgency, action, nervousness, exasperation, and excitement. Conversely, a slow pace will suggest contemplation, romanticism, relaxation, or simple pleasures.

Changing pace, even in a short digital story, is very effective. Our narrative can have starts and stops, pauses, and quick phrases. You can always change music tempo to build a sense of action or release. Moving from a panning effect on a still image that slowly stretches out our concentration, to a burst of images in staccato succession, staggers our senses and vitalizes the media piece.

Vitality is the essential issue. Good stories breathe. They generally move along at an even pace, but once in a while they stop. They take a deep breath and proceed. Or if the story calls for it, they walk a little faster, and faster, until they are running, but sooner or later they have to stop and wheeze at the side of the road. Anything that feels like a mechanical rhythm, anything that does not allow for that pause, to let us consider what the story has revealed, soon loses our interest.

Again, trust your own sense of what works. Everyone moves at his or her own pace.

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## ***Finally***

Experience has shown us that even people with years of training in various kinds of storytelling and communication lose touch with the fundamentals of story structure and media design. These ideas are a starting point. From here, you can do as we have done: develop mentors, build a library of resources, and deepen your practice to improve your skills and acquire the level of mastery that makes sense for your occupation and interests.

## 3 Approaches to Scripting

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After the first year of offering Digital Storytelling workshops in 1994, we saw the need to closely examine how people approached the writing process for their digital stories. Just because the subject matter was clear to a workshop participant, it wasn't always easy to get the script written. In the last chapter we talked about some of the reasons for that, but we really didn't discuss the notion of how to find your best creative voice for expressing yourself in writing. In the next chapter, I'll talk about form and structure for your story, as well as the considerations for working in multiple media, so leave aside those considerations for the moment. I am talking about how writing happens and what makes the way you write unique and powerful.

Our own practice has suggested several methods for success. We have also attempted to stay up to date with our colleagues' efforts in the broader field of creative writing and personal storytelling. In the bibliography, we reference a number of highly effective books on writing personal stories that we have used in our curriculum at UC Berkeley and as companions to some of our projects in the field.

As with our approach to Digital Storytelling in general, we find our practice is ideally suited to group settings. You could use these ideas to get started on your own, but success happens as often by comparing your work to others and by hearing a variety of examples. So find a few friends, declare yourself a writer's group, gather once a week for a month, and share your writing. Your digital story will thank you for your efforts.

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### *Our Friend, the 4 x 6 Index Card*

Of all the suggestions that we have made in helping people to prepare their writing, the use of 4 x 6 index cards has garnered the most praise.

The idea is simple. Writers, both novice and established, inevitably suffer from the malady aptly called "blank page syndrome." The weight of filling a blank page, or more likely many pages, crushes our creative initiative, and so, we cannot get going. It is not only how to start, but the overwhelming sense of the stack of blank paper, notebook, or endless word processing scroll that needs to be filled that makes the task seem undoable.

In our workshops, when we have found a person looking at the word processor with the deer-in-the-headlights look in their eye, we hand them a 4 x 6 index card. We say either, "you have 10 minutes, and only the space on the front and back of this card, to create a draft of your story. Write whatever comes out and don't stop until either the time or the card runs out." Or we say, "This is a postcard. Choose a person that you think this story is for, and write them a postcard about the story. Start with Dear \_\_\_\_\_."

The card is small. It is finite. It seems possible, perhaps even easy to fill. So for the novice, it is saying just get this much down, and we'll work from there. For writers confident of their ability to write pages of prose, it is also a creative challenge. We know you could write a novel, now just try and say it in only this much space.

One of my favorite Mark Twain quotes is from his sending a letter to a friend. He wrote, "Forgive me, this is a long letter. I would have written you a short letter, but I didn't have the time." Shorter isn't always easier for the mature writer.

The 4 x 6 card condenses the narrative as well. What are your choices in beginning? How quickly must you get into the action of the narrative? Usually this means sacrificing the long exposition that usually accompanies the first draft of a story. But often that works, particularly in a story that is narrating a visual narrative.

And finally, we are very, very pleased by short and effective digital stories. If the writing is no longer than the front and back of a 4 x 6 card (about 1 double spaced typed page), it insures that the writing will lead to a two to three minute story when narrated. Just the right size.

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### Writing Exercises

In a group process, I am a big fan of writing exercises. While I am fully aware of the potential and beauty of free writing, have the class spend ten to twenty minutes writing down whatever comes to their head. I find the shared themes and ideas of a prompted idea connects people to each other in wonderful ways.

This is my favorite prompt:

*In our lives, there are moments, decisive moments, when the direction of our lives was pointed in a given direction, and because of the events of this moment, we are going in another direction. Poet Robert Frost shared this concept simply as The Road Not Taken. The date of a major achievement, the time there was a particularly bad setback, meeting a special person, the birth of a child, the end of a relationship, the death of a loved one are all examples of these fork-in-the-road experiences. Right now, at this second, write about a decisive moment in your life. You have 10 minutes.*

The writing that comes from this prompt, when it comes unannounced at the beginning of a workshop, often goes straight to an emotional heart of the author's life. The sharing of these kinds of stories can be instantly bonding for a group. And once in awhile, they lead to new ideas for the digital story that the participant has brought to the class.

If the goal is to prod distant memories, we have not found a better approach than Bill Roorbach's idea of having participants in the workshop first draw a map of the neighborhood where they grew up (*Writing Life Stories*, Story Press, 1998 pp.21-34). Reaching back in one's memory to locate the layout of the streets, where friends lived, the names of friendly or weird neighbors, the way to the store, or the secret paths to school, inevitably opens up a hundred possible stories. The physicalization of a memory, trying to remember a time by remembering the places of that time, places you traveled through on a daily basis, a neighborhood, a house, a room, usually leads quickly to events, events that are rich with the kinds of meaningful inspections that make good stories.

There are innumerable prompts that might work for various situations. Here is a short list of some themes for which prompts could also be built for powerful stories. Books about writing are filled with these exercises, so don't forget to pick up a few

when it's time to look deeper into your interest in writing beyond the digital story-telling experience.

- Tell the story of a mentor or hero in your life.
  - Tell the story of a time when "it just didn't work" – a point, at your job, or at an activity at which you are competent or are usually successful, when every thing fell apart before your eyes.
  - Describe a time when you felt really scared.
  - Tell the story of a "first": first kiss, first day on a job, first time trying some thing really difficult, the first time your heard a favorite song, etc.
  - And of course, the old standby, what was the most embarrassing thing that ever happened to you?
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### ***These Stories from These Pictures***

Digital Stories often start with the pictures. Our easiest direction to anyone thinking about making a digital story is to look around their house, on the mantle, or the old shoebox, and find some images that provoke stories. Then see if there are other images around the house that are part of that story.

As we talk about storyboarding and structure, the notion of the illustration of the script is emphasized as an outgrowth of the successful drafting of your narration. But we would guess that 20 percent of the people that have come to the workshop have taken the absolutely opposite approach to the process. They pull out the photos, arrange them on a table, and then sort out an order from beginning to end. With the story visually organized, they then start writing. Is this effective? Of course. Some great stories have emerged through this process.

Our only caveat is to consider whether or not by responding to the images alone, you are possibly leaving out parts of a story that never were captured in any images in your archive. If you do imagine an image that is missing, then you can look to an illustration or an appropriately implicit or metaphorical representation to capture the sense of the writing.

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### ***Getting into the Scene***

When authors come to the Digital Storytelling workshop, we have them share first drafts or just talk about their ideas for the story. The feedback will sometimes reference the ideas in structure that are discussed in the first three of the Seven Elements, but often I find myself discussing the notion of scene with the authors.

As an example, I can take one approach to my own story about my father's death.

*Well, first of all, let me just say, I was seventeen at the time. And I had finished high school that summer. My dad had smoked three packs a day and had been trying to quit smoking for a couple of months. He was 61 and had a difficult life as a union organizer working in Texas and the South. But we had had a vacation the month before and he seemed like he was doing okay.*

This idea of scene is related but separate from the terms of the specific disciplines of literature, theater, and film. Dramatic scenes all have complex sets of conventions that allow us to observe the action of characters within a continuous time of the narrative. In our thinking about scene, all we want is to encourage people to share at least one portion of their narrative as a scene — to write as if they were there, inside the events as they unfolded, experiencing their shock, surprise, amusement, etc, for the first time. For many stories, this strips away the superficial consideration of the events, and gets to the heart of the matter.

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### ***Character Studies and Personal Story***

We know that most of our parents are multi-faceted, complex humans. In one story, it may serve to have the parent in the classic role of the ideal mentor, filling one stereotype of parenthood. In another story, the parent may be a beast, or display beastly behavior, but if we are mature enough, and we are given one small nugget of context, for example, "when they got drunk, they would be mean," it is sufficient for us to imagine they had good days as well. We are probably aware that the story is a cautionary tale about human behavior, not the evidence to indict the guilty party.

Lagos Egri, author of the bible of my training in dramatic theory, *The Art of Dramatic Writing*, (Touchstone Books; February 1972), reduced all great storytelling, all great theater, to the author's understanding of the true nature of the characters he invents in the world of his narrative. Like most people, when I watch a film or a play, it stops working the moment I say to myself, "you know, that character would have never said those words or behaved in that way." In any story, it simply will not work if both characters' strengths and flaws do not drive the series of events forward leading logically to the climactic clash or coming together that delivers the conclusion of the story.

When we write in the first person, about real events, about real people, we make the same choices as the fictional author, that is to share description of the characters only as is pertinent to the story. It is nothing short of egomaniacal to imagine these characters are faithful portraits of the actual people. In our digital stories, they are not even sketches, more like cartoons or line drawings.

Some of the writers that have participated in our workshops are a bit fixated about faithfulness in their study of character. They fear providing too simplistic a picture of the people they are describing, or their behavior in a given context, so they expand the narrative with a multiplicity of facets in the endeavor to feel more "fair." Personal storytellers are not judges or juries, they are witnesses, and just as with witnesses, we seek truth inside and around the simple lines of the sketch of their memories. We, the audience, are capable of judging from their approach to the narrative, if their attitude and tone reflect balanced judgment or unreasonable accusation.

By letting the story dictate the degree to which we need to know the background of the character, we avoid cluttering some of the prose with assessments that cancel each other out. Why is certain behavior typical or surprising, for example? Which characteristic, for the purpose of the story, can we fill in with the broad brush of a stereotype sufficient for our small tale so the audience can fill out the character with the complexities of their own experience with specific individuals?

*He came down from his bedroom saying that he had a terrible pain. We called the doctor. The doctor said that it was probably an ulcer attack. He had had several of those. We waited. He got much worse. We decided to rush him to the hospital. It was a heart attack. He died within a half hour. My mom was hysterical. It was a night I will always remember.*

What we have is a fairly typical set of expository contexts and sequence of events that most people use to casually recall a major catastrophe in their lives. It is a fairly direct and distanced recitation of the facts. And it usually finishes with a statement that is conclusive, but as in this example, understated and obvious to the extreme. If this were dramatic dialogue, a speech by an actor pretending to be natural, it would be fine.

But here is a description of the same memory that I shared at my mother's memorial in 2001, twenty-seven years after my father died. This is how my statement began:

*I will never forget the sound of my mom's voice when the doctor said, "George is dead."*

*God No! No! No!*

*A scream. A release. An explosion.*

*The sound of her wail bounced off all the walls of the emergency room at Presbyterian Hospital in Dallas, bounced down the streets and through the trees, bounced out into the night sky, all the way across the universe of my young mind.*

*In a single moment, a single pronouncement, everything changed for my mom. It divided her life in two. And it taught me that love can reach down into the cellular essence of awareness, and with its rupture, tear a human being in half.*

What differentiates these two texts for me is, in the second text, that I am asking my audience to immediately journey in time with me to the exact instant when it all really happened. No context, other than the assumption that "George" must be someone really important, and the feelings, best as I remembered them, of the defining moment of the experience, my mom's reaction to the Doctor's words. And finally, with over 25 years perspective, what that means to me now.

I tried to take the audience into the scene at the hospital. I could have described the way it looked and smelled, where we were standing moments before the doctor came up, what happened afterwards, but I assumed that when I said it is the moment that my father was pronounced dead. Instead it serviced my sense of the writing to strip away all this descriptive material.

We have found that audiences really can build a fairly elaborate guess as to the pretext of an event. And we know that much of what seems like important background, is in fact superfluous to what really happened and what it really felt like to be there.

Taking the audience to the moment of an important scene, one that either initiates or concludes your tale, and putting them in your shoes is why we listen to the story. We want to know how characters react. We want to imagine ourselves there as participants or witnesses. We want to know what someone else takes away from the experience and uses to lead their lives forward.



## *Finally, A Few Words on Style*

During my high school and early college days as a young journalist, I carried around a copy of *Elements of Style*, the William Strunk and E.B. White companion for all writers. I have to be frank, except for their call for economy, economy, economy, not much stuck in my sense of the rules of good style. In other words, I am the last person to teach anyone about formal issues of style.

Having said that, Strunk and White might have been apoplectic at much of what I love in the styles of the writing of our students. What works, particularly as the words leave the page and are spoken by the authors, is not a case study in language usage according to conventions of grammar and syntax defended by the gatekeepers of the English (or any other) language.

*What works is truth.* What I mean is a given author's truth about how they conceive of their way of telling a story. How does truth happen in storytelling? Here is where the journey metaphor serves me best. Good writing has a destination and seeks the shortest path to the destination but no shorter. The destination, as we discuss in the next chapter, is usually the punch line, the pay-off, the point of the story. Detours are never accidental, unconscious, or indulgent. Each word, each apparent digression, is critical to the final resolution of the characters' action. I am a traditionalist in this idea, having never fallen for what feels to me a experimentalist conceit of an anything goes approach to narrative.

But that is my truth. I have had the pleasure of hearing thousands of people share their stories, each with their own style of telling. Some people like the journey along the road of their story and a bunch of learning that happens along the way, rather than the arrival of a singular big lesson or moral to the story. Other people love the wonderful mystery and elasticity of language, and what they mean by story is what I might mean by poetry. Other people find themselves hearing the sounds of words like music and really are not concerned with meaning of the words per se as much as the aural jazz of the presentation that creates a dominant tonal impression whose meaning is profoundly more complex than the simple "message" of the story. In that sense, I accept that when it works, it works.

The good news about those of us living at the beginning of the twenty-first century is that we have an awareness that what and how we tell our stories has much less impact than how we are heard. Stories do a number of things to people, but only a small part of what they do has to do with our intention with the style and content of the story. When people hear the story, what is going on in their lives at that moment that focuses or distracts their attention, what ways the story is contextualized, where the story is being heard, the ambiance of the environment, who else is in the audience, etc. changes everything about the story and its impact.

We felt this in our own workshops when the fabulous release of the completion of a workshop and the enormously transformative effect each story has on all of the participants cannot possibly translate to an audience that did not share our story circle.

So trust your own voice, the way it feels right to you to put things and your own approach to these stories. And make sure, that when it comes time to share your story, you are certain that the context is best suited to your story being appreciated at its fullest.

# 4 Storyboarding

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## *What is a Storyboard?*

It is a place to plan out a visual story in two dimensions. The first dimension is time: what happens first, next, and last. The second is interaction: how does the audio information – the voiceover narrative of your story and music - interact with the images or video? In addition, a storyboard can be a notation of where and how visual effects-transitions, animations, compositional organization of the screen - will be used.

Storyboarding in the film world is in itself a high art: mixing a sense of seeing the composition of a scene unfold before the camera with all of the many choices available to a director regarding camera placement, focal point, duration of shot, possible edits, and camera based effects such as panning and zooming. Storyboard artists combine illustration skills and a sense of stage business (where actors, props, and sets are placed before the window of the camera) with cinematography and cinematic theory to write the road map that enables the director and film crew to organize every part of a film production.

The art of film storyboarding has taught anyone working on a film, animation, motion graphic, web design, and digital story a singular important lesson. Planning on paper saves enormous amount of time, energy, and money when it comes time to produce your work. Taking the time to organize your script in the context of a storyboard tells you what you need to illustrate your story. Developed from the selection of images you have in your archive, a storyboard tells you the order in which they will appear and makes your edit go quickly. But much more importantly, especially with our novice storytellers, storyboards clarify what you do not need and save you from scanning, photographing, shooting video, designing in photoshop, or recording things that simply have no place in this particular story.

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## *Recipes for Disaster*

Our cautionary tale concerns Tom, just an average guy, getting ready to make his first digital story.

"What a great morning," thought Tom. Stepping out his back door and going to the little studio he had cleared out of a corner of his garage. "Today, I become a filmmaker. I am going to make my first digital story this weekend. Today, I'll assemble all the material I need. Tomorrow, I'll edit it together."

Tom's story was a tribute to his parents. Their 40th wedding anniversary was in a week, and he had a great idea about a retrospective of their lives. He had taken two large boxes of photos and a few old 8 mm films from his parent's home, a three hour plane trip away. He was confident that if he could just sort through the stuff, the story would write itself. "I know that's how Ken Burns does it; I just have to gather all the sources and piece it together like a puzzle."

He had his computer fired up. He had a scanner and digital camera handy, and the

video camera set up on a tripod next to the old 8mm projector. He was going to record the film being projected against a sheet he had hung on the wall. Ingenious, he thought to himself.

The day began smoothly. Tom organized the photos into piles representing five decades of his parents' life together. "Man, these are great, I think I'll scan these 8 from the fifties and these 12 from the sixties, but the ones from the seventies, when I was born, god, there are at least 30 of these I have got to use." And on it went. The piles grew. No scanning yet. He broke for lunch.

Then came the film. "Old 8mm film is really beautiful, isn't it?" he thought. "My parents are going to love this part when I had my first little swimming pool. Wow. I'll just transfer it all and then make my selections tomorrow, during the edit." A few glitches in the camera, but eventually he got it right and by about 4 pm the video was recorded on the camera. He thought about taking notes about which sections were on his two hour tape, but he was having so much fun reminiscing he never got around to it.

"Music, yeh. I have to find the right music, old show tunes and stuff. And I need a few archival images, I bet I can find that stuff on the internet." After dinner, he got online, and around 11 pm, he found his eyes had become blurry and his mouse hand had gone numb. But he had the stuff. All in one big folder on the computer.

He woke up in the middle of the night. Tom opened his eyes, "You know the part where they are looking out over the Grand Canyon, I can cut to a shot of me digging myself into the sandbox when I was three. That will be soooooo cool." I can't wait to start.

The next day, he scanned, he played with Photoshop, and he captured way too much video on his computer so he ran out of hard drive space. He played with his morphing software. He did everything but start on the story. Sunday evening came and it was still a big mess.

The week was a nightmare at work, so he only had a few hours to actually edit. The event approached on Saturday, and the best he could complete was an extended music video, 14 minutes long, with whole sections of images, film and titles bumping, flipping, and gyrating for reasons unknown. Several of his parents friends fell asleep during the showing, and at the end there was a spattering of applause. Tom attributed the reaction to the heaviness of the gravy on the chicken stroganoff that was served at the dinner.

His mother, of course, cried through the whole thing. His father, always supportive, thanked him, and said, "Tom, that was, well, really . . . interesting."

Digital stories have the advantage over film production in that you are often using available material at the core of your project, but as our story shows, the material itself is profoundly compelling, particularly if it is being visited for the first time in years. Without a script, and an idea of how the story is told, it can overwhelm the best of us.

Tom's tale is the worst case scenario for the digital storyteller. So much wonderful content, so many cool tools to play with, so little real idea of what they are doing. We have met many people that had symptoms of these obsessions, and in our workshop we try and gently bring them back down to earth. We affirm that the material is irre-

sistible, but we encourage that the first draft of the script be written, and at least a bit of storyboard work considered, prior to diving into an immense archive.

Just as the professional uses the storyboard as a critical production management tool, saving countless hours of experimentation, over production of non-essential material, and wasteful over-scheduling of manpower, we want to encourage our participants to reach for their highest level of organization to maximize the precious time most of us have to create these movies. For many of our workshop participants, life may give them only a few such opportunities to really mine their archive for the critical stories of their lives. And frankly, their bosses, or the demands of their lives, may give them very little time to do the projects at all.

We want to honor all different kinds of creative processes. For some, time is not so extravagant a luxury. If you can afford to excavate your archive completely, to fully examine the creative palette of multimedia tools, and to work through a series of drafts of your project to move a highly polished piece, the rewards are equivalent to the effort.

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### ***Making a Storyboard***

Our reference here is from a tutorial called *Momnotmom*, developed by current and former staff at the Center for Digital Storytelling. The tutorial is based on a reflection by former staff member Thenmozhi Soundararajan. This section of the movie consists of a title, six photographs, and a short video clip. The soundtrack is a nice piece of guitar music. We've laid out the storyboard on the following pages.

Notice how few words of the voiceover are under each picture. Each line takes about six to 10 seconds to speak. In general, three to four seconds is about the ideal length for any still image to appear on the screen. Too short, and it's hard for the viewer to recognize what's being shown; too long, and boredom sets in. If you're laying out your storyboard and find lines and lines of text under any one picture, rethink your script or your images.

Can the script be cut down and the image left to speak the missing words? If the text remains long, can more than one image illustrate the essential words? You can also use effects to extend the viewer's interest in a single still image, like an image pan that we will show you later in the tutorial. But for now, try to use the best effect of all: letting images speak for themselves and using words to say the rest.

### **Some Ways To Make Your Storyboard**

1. Get a piece of posterboard, preferably large (22" x 17") and a packet of Post-it notes. Sort out the image material you plan to use, and label each of the Post-its with the name and, if needed, a phrase describing the image.
2. Create 5 or 6 rows horizontally across your posterboard, leaving room for writing text below each Post-it. Fill in the text of your script in pencil, and place the appropriate images above the appropriate words. The Post-its will allow you to move things around or take them out as need be, and you can erase the text if you want to move it around.
3. Instead of labeling Post-its with the name of each image, you can make photo

copies of your photos. (Shrink them a bit.) Tape or glue your copied images to the Post-its, and lay them out on your storyboard. The advantage here is that, just as on the computer, you can easily move things around.

4. If you know desktop publishing software like Adobe's Pagemaker or Quark Express, or Microsoft's Frontpage and you're familiar with how to scan images, you can make your storyboard right on the computer.

Any of these methods will work. Do whatever is convenient and easy for you.

A storyboard will speed your work in many ways. It can show you where your voiceover should be cut before you record, and it may help you to determine if you have too many or too few images chosen before you begin scanning.

Storyboarding is a valuable tool, but it can also be fun. Get others to join you in your storyboarding process and make it a collaborative project.

Images



Effects

Fade In

Image Pan

Image Pan

Image Pan

Image Pan

Transitions

Cross Dissolve

Voiceover

There is a picture of my mother that I always keep with me. It is a curious photo, because in most photos I always imagine that people pose for the future, but in this time, this moment, this photograph I feel like she is searching for her past.

Soundtrack

Fade in  
guitar chord progression

Images



Alpha Channel Motion

Effects

Transitions

Cross Dissolve

Cross Dissolve

Cross Dissolve

Cross Dissolve

Voiceover

Across oceans and between cultures, I think back to who she was as a girl, a young woman, a doctor, a wife,

Soundtrack

guitar chord progression

## 5 Digitizing Story Elements

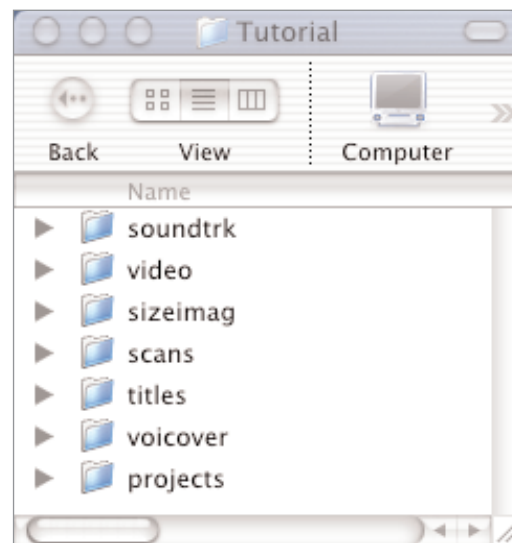
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Now it's time to turn your photographs from just a set of images on paper to a moving image on the screen, edit your own home movies, capture your voice and music, and blend them together into a digital story.

First we need to get organized and think about file management: an organized filing system will make your project go much faster and make things easier to save and find.

Let's take a look at how our tutorial project *Momnotmom* was organized:

Create the same set of folders and sub-folders (Mac-speak) on your hard drive. Name the main folder or directory the name of your project (or your first and last name, for easy identification in group situations where computers are being shared.) The folders “roughimages” and “readyimages” refer to images that are the originals and images that are ready for use in a video application.



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### Scanning Images

This tutorial is geared towards a flatbed scanner. With so many brands of flatbed scanners and scanning software now available, this can only be a general overview. Refer to the documentation that came with your scanner for specific instructions.

#### ***What Can Be Scanned?***

Similar to a xerox machine, you can scan anything that will fit on top of the scanner glass. This includes photographs, drawings, letters, pages from books, album covers, fabric or clothing, even a maple leaf: typically two dimensional objects. However, scanning three-dimensional items can make for very interesting results. The process of scanning itself can be part of the creativity of the project.

Size is a limitation in flatbed scanning in that items larger than the scanning area can only be scanned in sections. With some time and a bit of practice, the parts can be woven together digitally in Photoshop. A faster approach is to take a digital photograph of a large item. If you don't have access to a digital camera, a film camera will work and then scan in the photograph.



### ***Flatbed Scanners***

The scanner itself is simple to operate. Lay your items face down on the glass. Try to fill the entire glass area with items you want to scan to save time. Close the cover. If you have photos with drastically different lighting, it usually works best to group them together with similar photos (like doing laundry), separating lights and darks. If you are scanning a three dimensional object and cannot close the scanner lid completely, covering the lid with a dark cloth or item of clothing to shield as much light as possible from the room will result in a better scan.

The scanning controls are in the software you install when you set up your scanner. Often you will also have a plug-in that allows you to scan through software like Adobe Photoshop. Look under the File/Import menu for an option for your scanner. The features available depend on how fancy your scanner is. Most will give you an option to preview the image first before you really scan it in. Take advantage of that feature to crop out blank space around the image(s) or unneeded parts of the image. A selection or cropping tool should be available to draw a rectangular selection on the preview screen, thus marking the part of the image you want to scan. Cropping also saves disk space and time.

An important setting you'll want to check before you scan is the dots per inch (dpi). That tells you the number of printed dots, or pixels, per inch in a photo. Dpi determines the visual quality of an image. For example, web images are typically 72 dpi to reduce file size, whereas photos for fine book printing are scanned at 600 dpi. Knowing that a higher dpi gives richer detail might tempt you to scan at a higher rate. However, a moderate dpi of 200 in most cases will provide sufficient quality for digital video and prevent slow image-processing time in both Photoshop and your digital video editor. The only exception is if the item you are scanning is quite small, for example, a postage stamp, and you know you will be increasing the end size of the image. In this kind of situation, scan at about 300 dpi.

### ***How To Save Scans***

As you scan your images, you will be asked to name the file, choose a file format for saving it, and identify where on the computer you would like to save.

As you name your files, give them short descriptive names to make it easier to remember which is which later on, when you begin editing the images. Try to keep the names under 8 characters - especially if you'll be switching between a Mac and a PC. Keep in mind that you'll almost always have a thumbnail of the picture too.

There are about a dozen graphic file formats. While most scanning software don't have that many options to choose from, typically they will have Photoshop or PICT file format. Some people choose to save their graphics files in JPEG format. If disk space is at a premium, that may be a good option. However, the JPEG format will compress the file and lower the image quality. You may wish to research the recommended file format for use with whatever digital editing software you're using.

Because you organized your story project before you started scanning, you already have a place to store your files: in your *Roughimages* subfolder.



## Digital Images - From Your Camera or the Web

Many of us have an increasingly large archive of digital images taken with digital cameras. Most of these images are immediately ready to be used in your digital story. The resolution of course depends on your camera and whether it was set for the highest resolution.

One and two megapixel digital camera images at their highest setting can be used in a digital movie, but they may pixelate (degrade) if you are cropping and/or panning/zooming on the image. Three megapixel and above images will work fine for any story.

If you decide to use stock photography or images you acquire on the web, make sure they are of a minimum resolution. The pixel dimensions of width and height should add up to at least 1000 pixels. Examples: Good = 100W x 900H, or 500W x 500H, Bad = 100W x 200H. You can find the pixel dimension in your browser by right mouse clicking the image on a PC, or holding down your mouse for a couple of seconds on a Mac, and then opening the image in a new window. The pixel dimension is indicated in the title at the top of your browser window.

If you're downloading images from a site such as Google's image search, it will tell you the pixel dimensions of the picture you want to download on the thumbnail page. Do not download the thumbnail of the picture, but the full-size picture. (Note: keep in mind that web images are NOT copyright free. The same issues regarding copyright that we discussed when talking about the element of Sountrack, in Chapter 2, apply.)

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## Digitizing Video

Digital storytelling is an opportunity to repurpose existing material to tell a story. Most of us have photographs that assist us in telling the story, but some of us may also have video or even film relevant to the story. Those without video footage can zoom and pan across still photos, but even a short piece of video can add to the effect of your story. In *Momnotmom*, the use of a short clip from an old wedding video adds a great deal of emotional depth.

Because most of our students are beginners, however, we tend to recommend that if a still image is as effective at expressing your idea as a particular segment of video, they may wish to stick with the still image to eliminate a lot of time and worry.

If you would like to put a piece of video into your story, the approach to capturing the video onto the computer will depend on the current format of the source material and the hardware and software available to you, the amount of disk space to store it on, and the memory to work with it once you start editing.

The standard of digital video on newer computers and video cameras has greatly simplified the process of capturing material onto hard drives. More often than not, the options for connecting cables from the camera are Firewire or USB. For capturing on a PC, some hardware may be necessary, such as Firewire card. With a newer Mac running iMovie or another video editor, the connection process is fairly seamless. Be sure to investigate the specific capabilities of your editing system and equipment.

## Capturing in iMovie

iMovie makes it incredibly easy to capture video. Just a) connect your camera to your Mac with a Firewire cable, b) open iMovie with your digital camera on in VCR mode, c) click on the Play button, and d) then when you get to the part you want, click on **Import**.

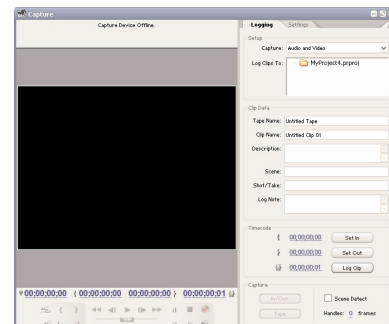
iMovie will save the captured video in the Clips panel to the right of the capture window.



You can fast forward and reverse the tape using iMovie to operate your camera. We recommend capturing “handles,” which means that you begin recording a few seconds before the first part you want and a few seconds after the last part, to make sure you get everything you want.

## Capturing in Premiere

Plug your camera into your PC. Most cameras have Firewire “out”, but most PCs do not have Firewire “in” port. Make sure yours does. Some new DV cameras have USB out, making it easier for people using PCs to capture video. After opening Adobe Premiere, go ahead and start up the capture window by going under **File** to **Capture**. Make sure your camera or DV player is connected and turned on.



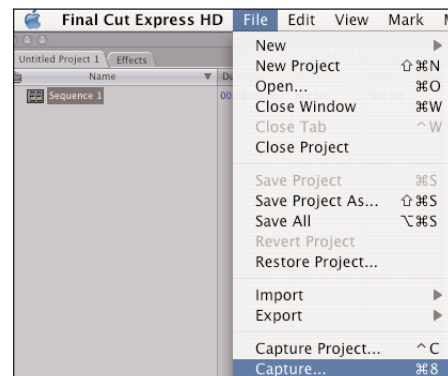
If you are able to see your source material playing in this window, then you are ready to capture. If not, click on **Edit > Preferences > Device Control**, and then click Options. This brings up a pull down window that can allow to select **DV Device Control** and options to set the specific compatibility with your camera.

In the main Capture window, you can also set a preference for where you want your video clips saved (or logged to). We suggest you target the movies to your own project folder in a folder entitled Video. Once you have recorded a segment of video, remembering to capture “handles” as mentioned above, you will be prompted to title each clip before saving it. Make your names of the clips descriptive to help you remember selections.

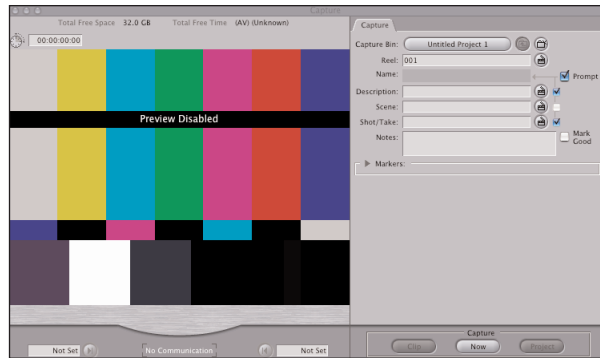
## Capturing in Final Cut Pro or Express

Final Cut Pro has a similar mechanism to Premiere, called the **Capture** Window. This is found under the File Menu.

Like Premiere, Final Cut allows you to view your tape and make logging notes about sec-



tions, and return to capture any section you desire. Or you can capture as you go along in the process.



## Recording a Voiceover

Although the voiceover, a recording of your script, is the foundation of any digital story, performing the reading can cause some anxiety. Hearing one's own voice being played back is strange to many people, especially those who aren't used to hearing it recorded, not to mention telling one's own story (especially if they haven't told it out loud before) or hearing one's own story. Before we launch into the technical details, go back first and reread our thoughts on why the voice is such a special and important part of the digital story.

Now we'll show you the tools to make sure your voiceover is of good quality. You will need to plug a microphone into the computer's mic jack to record your voice directly into the computer. Some computers come with a microphone built-in, or with a small plug in microphone. We have found these will do in a pinch, but it is much better to have a mixing board to control gain (volume in) and equalization (higher or lower range of voices). We have listed our recommendations for an audio set-up on your computer.

Special software exists for audio capture and playback. Just like a pixel image on a screen, audio is measured by the amount of bit depth that is assigned to each second of audio. The higher the bit depth (8, 16, 24), the better the audio. Audio is also calibrated by the dynamic range of information recorded, from low (11 kHz) to high (44 kHz). Most, if not all computers will allow you to capture some sort of audio signal.

We recommend that you record your voiceover at the same quality level that you record your musical soundtrack: 16-bit, 44 kHz.

Many software programs exist for capturing audio from an external sound source, like a microphone. On PC platforms, these include the built in Sound Recorder software, shareware programs like Audacity, and a number of professional level audio and video production software.

### Center for Digital Storytelling Recommended Audio Set-up:

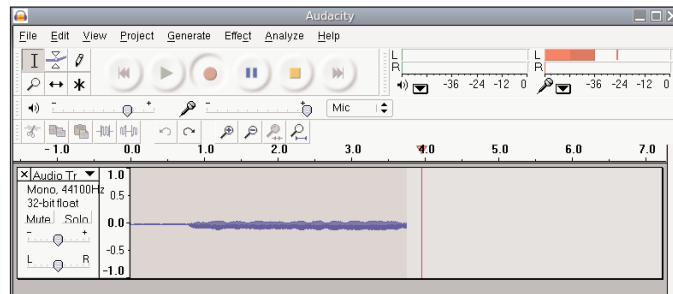
1. 4 Channel Mixer  
(Brands: Behringer/Mackie)
2. Condenser Microphone  
(Shure, AKG)
3. Boom Microphone Stand
4. Aspiration Guard
5. Microphone Cable
6. Stereo Phono (1/4")  
Stereo Mini Cable (1/8")

## Recording a Voiceover in a 3rd Party Software

On an Apple Computer, you can use Sound Studio (a demo version is available for free download at [www.feltip.com](http://www.feltip.com)), iMovie, or Final Cut Express or Pro to capture voiceovers. On a PC you can use Audacity (a demo version is available for free download at <http://audacity.sourceforge.net>). First you need to make sure you have your Sound Input settings set to the appropriate input. You can set this by clicking on the Speaker in your System Preferences and selecting the appropriate input. If you are using a mixer and microphone to record, the setting would be **Sound In**.



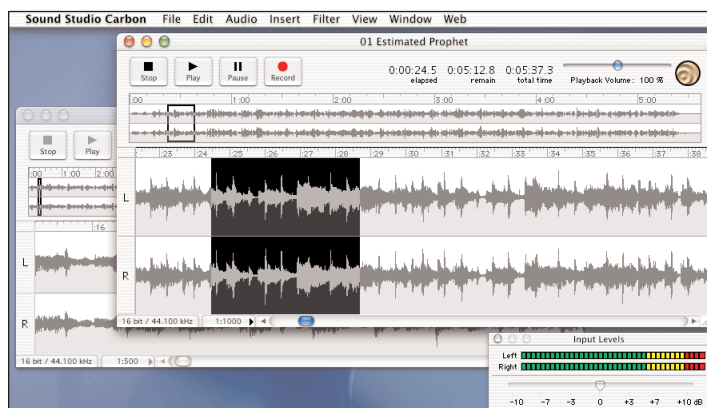
With this done, open the software program and create a new file from the file menu. An empty timeline window will pop up. You should be able to “see” your voice in the Audio Levels monitor. Check the sound input and be sure you’re recording. If you are, you will see the colored sound level bounce back and forth in the active window.



We suggest recording your voiceover in segments. Your script will guide you in how best to break it sensibly into segments of one, two, or three sentences at a time. After you’re done with each segment, play it back to make sure the sound level coming over the computer’s speakers is clearly audible and does not break up into distortion during loud passages. We also suggest you make sure your surrounding sound environment is as quiet as possible. We almost always have people record in a private, quiet room. Make sure fluorescent lights aren’t buzzing and jewelry isn’t jangling.

Click on record, speak a sentence or two, and click on stop.

The sound file is represented in a waveform. While listening to the sound is a good indication of an effective level, a large wave form is a better indication that the sound levels have been set appropriately. Your voice should measure in the upper greens to yellows of



the Audio Levels monitor, but should not go into the red. Here are examples of audio files.

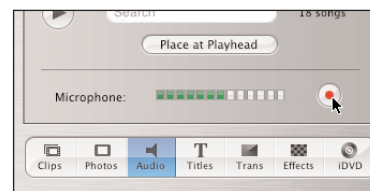
You can boost the sound a little in Premiere or Final Cut, but it's best to re-record much-too-soft clips. Too loud audio files have the tops and bottoms of the wave clipped off. That's what causes "clipping" or a crackling distortion in the audio. These definitely need to be re-recorded. Adjust your mixer output, get closer to or further away from the microphone, or speak a bit louder or softer until you get the right wave form.

We suggest saving each segment with a file name, containing the key word from each sentence. Before these words, add a letter from the alphabet. For example, files for *momnotmom* are named "*a. theres.aif*", "*b.curious.aif*", "*c. across.aif*", and so on. This will place each in consecutive order in the timeline track of your editing software.

These software tools will almost always record in .aif, .wav, or .mp3 format. Any of these can be imported into Premiere, iMovie or Final Cut.

### Recording a Voiceover in iMovie

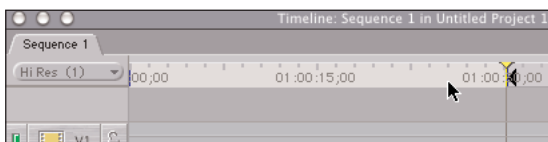
iMovie has a built in application for recording voiceovers. iMovie records them straight into your Timeline wherever the Playhead is placed. The files are stored in the Media Folder of your iMovie project, and you can rename them and use them in other programs as well.



### Recording a Voiceover in Final Cut



Final Cut Pro works much the same as iMovie. You find the **Voiceover** tool under the **Tools** Menu. The record feature writes to the timeline and creates the files as part of the Final Cut render files.



at the beginning, click on your letter I key to set the in, then move down the Timeline for a reasonable duration for the segment you want to record, and click on your letter O key to set an outpoint. From here you can record.



Unlike iMovie or Premiere, you need to first set an In and Out point on the Timeline that indicates where you want the voiceover to go. Click on the Timeline window, place your playhead

## Capturing Musical Soundtracks

Most music used in soundtracks comes from one of four sources: a recording of an acoustic selection of music (as in a friend playing a guitar, piano, or other instrument) directly onto the computer, a recording on an analog device (tape recorder, phonograph, or mini-disc), a CD audio recording, or a digital file (mp3, wav, aif, etc). In the first two instances, the procedure for recording is much the same as with your voiceover. For the first, you put the musician in front of the microphone and have them play. For recording from a tape player or other analog device, you connect the device either directly to the computer's audio line in, or better still, you connect it to the mixing console that you used for your microphone. The controls in each of the programs would be the same. (Of course, you could also record audio on a video tape and capture it as with video capturing, discussed above.).

If you have your chosen music on CD, however, your task is somewhat easier. On an Apple Computer, all three of the programs work on the same concept. They use the Quicktime functionality that translates files to Mac friendly formats. In Premiere for Mac and Final Cut Pro, you simply open the CD Audio track you want, and the program does the conversion. iMovie uses the iTunes program to automatically offer the list of tracks, and you can select, and then Place at Playhead, the soundtrack you want, and it will convert it and send it to your Timeline.

If you already have an MP3 collection in iTunes or use the popular sharing programs or online music purchase programs, then you can use your Mp3's directly in any of these programs by importing the file into the program, or again with iMovie, using the iTunes Library feature.

Those of you working on a PC may not be able to copy a file from a CD directly into your Soundtrack folder for your project. If this is the case, a program like iTunes for PC should allow you to import the music and convert it to a file type that your software will accept (mp3 or wav).

Make sure you do not import a song directly from a CD into your project. When you eject the CD, it may remove the song from your timeline. Instead, always remember to copy the song into your Soundtrack folder, and then import it.

